Body Temperature

Why control temperature?

Environmental temperature is constantly changing. One minute it can be very hot; the next very cold.

Despite this, the body must be kept at a constant temperature of **98.6 °F**, or **37 °C**. Why?

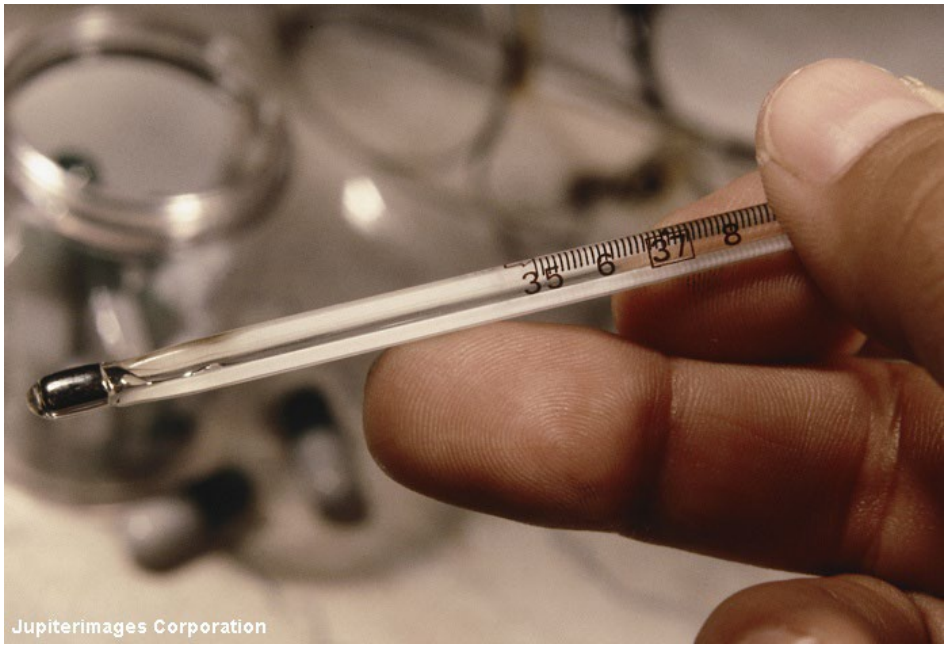
This is the optimal temperature for the body's enzymes.

Even slight changes in body temperature can have a life-threatening effect on health. If body temperature falls too low, reactions become too slow for cells to survive; too high, and the body's enzymes are at risk of denaturing.

What is core body temperature?

The vital organs located deep within the body, such as the heart, liver and kidneys, are maintained at 37 °C. This is the **core body temperature**.

Skin temperature at the body's extremities, such as the fingers and toes, is usually lower than the core body temperature.



On a warm day, skin temperature may be just 1 °C lower than the core body temperature, but on a very cold day it could be up to 9 °C lower.

Finding the right balance

Core temperature is maintained by balancing heat gain and heat loss.

What increases heat gain?

- movement and exercise
- shivering

What decreases heat loss?

- vasoconstriction
- wearing extra clothing

What increases heat loss?

- sweating
- vasodilation
- removing extra clothing

Too hot…or too cold?